What is claimed is :

1.   A real/complex dual combination channel equalizer, comprising :

a channel select unit for outputting selectively real data and imaginary data transmitted from a transmission terminal ;

a coefficient operation unit for outputting a real filter output values and an imaginary filter output value by multiplying each real or imaginary data outputted from the channel select unit to a tap coefficients ;

a tap coefficient renewal unit for renewing the tap coefficient ;

a feed-forward filter output unit for removing precedence interference noise from a signal outputted from the coefficient operation unit ;

a subtracter for subtracting data outputted from a real decision orientation filter unit from data outputted from the feed-forward filter output unit ;

a real slicer unit for generating real decision data and a real error by data outputted from the subtracter ;

a complex real slicer unit for generating complex real decision data and a complex real error by data outputted from the subtracter ;

a real decision orientation filter unit for generating a successor interference signal by being inputted the data and error outputted from the real slicer unit and complex real slicer unit ; and

a complex imaginary slicer unit for generating complex imaginary decision data and an imaginary error according to a signal outputted from the coefficient operation unit.

2.   The real/complex dual combination channel equalizer according to

claim 1, wherein the channel select unit comprises :

a multiplexer for selecting the inputted real data and imaginary data ; and

a delayer for delaying the real data.

3.   The real/complex dual combination channel equalizer according to claim 2, wherein the real/complex dual combination channel equalizer operates as 4 steps 1 tap in the real mode, and operates as 1 step 4 taps in the complex mode.

4.   The real/complex dual combination channel equalizer according to claim 1, wherein the feed-forward filter output unit comprises :

an adder for adding the real filter output value to the imaginary filter output value ; and

a multiplexer for selecting the value outputted from the adder and real filter output value and outputting them.

5.   The real/complex dual combination channel equalizer according to claim 1, wherein the tap coefficient renewal unit comprises :

a channel select unit for outputting selectively the inputted real data and imaginary data as symbol data corresponding to the real/complex mode ; and

a tap coefficient output unit for outputting a tap coefficients by operating the real error and imaginary error selected in accordance with the data outputted from the channel select unit and real/complex mode.

6.   The real/complex dual combination channel equalizer according to claim 5, wherein the tap coefficient output unit comprises :

a first and a second imaginary tap coefficient output units for outputting a first and a second imaginary tap coefficients ; and

a third and a fourth real tap coefficient output units for outputting a third and a fourth real tap coefficients.

7.   A real/complex dual combination channel equalizer, comprising :

inputting real data to the channel select unit ;

outputting the real data delayed through the delayer of the channel select unit ;

outputting a value by multiplying a tap coefficients to the outputted real data, and adding mutually ;

outputting the final data of the filter by subtracting the data outputted from the real decision orientation filter unit from the outputted data ;

outputting the real decision data and real error by the outputted data ; and

renewing the tap coefficients by the operation of the outputted real error and data outputted from the channel select unit.

8.   A real/complex dual combination channel equalizer, comprising :

inputting real data and imaginary data to the channel select unit ;

outputting data selected by the channel select unit ;

yielding real filter output data and imaginary filter output data by multiplying tap coefficients to the outputted data and performing operation ;

selecting and outputting imaginary filter output among the outputted data ;

outputting the final data of the real filter by finding a value by subtracting the value outputted from the real decision orientation filter unit from the outputted

data ;

outputting the complex real data and error by the outputted data ;

outputting the complex imaginary decision data and error by the outputted imaginary filter output data ; and

renewing a tap coefficients by the data outputted from the channel select unit and the complex real error and imaginary error.

9. The real/complex dual combination channel equalizer according to claim 8, wherein the renewing process comprises the steps of :

outputting a first and a second tap coefficients by subtracting the value found by performing the operation of the imaginary data and imaginary error from the value found by performing the operation of the real data and imaginary error outputted from the channel select unit ; and

outputting a third and a fourth tap coefficients by adding a value found by performing the operation of the real data and real error outputted from the channel select unit to a value found by multiplying the imaginary data to the imaginary error.